Air University

Department of Electrical and Computer Engineering

Assignment: Fundamentals of Information & Communication Technology

Course: Information & Communication Technology (ICT)
Semester: 1st
Total Marks: 50
Submission Date: 22nd October 2025 (11:59 PM)

Submitted to: Engr. Muhammad Naveed Khurshid

Instructions:
- Attempt all questions.
- Answers must be typed and well formatted (font size 12, Times New Roman, 1.5 line spacing).
- Include examples, diagrams, or screenshots where necessary.
- Submit in PDF
- Plagiarism above 20% will lead to disqualification.

Section A: Short Questions (2 marks each – 10 Marks) (CLO-1)

1. Define a computer and explain its basic components.

2. Differentiate between data and information with examples.

3. What is Information and Communication Technology (ICT)?

4. Give two real-life examples of ICT applications in education.

5. What are the main functions of an operating system?

6. Explain the term search engine and name any three popular ones.

7. What is the difference between communication and collaboration tools?

8. Mention any two advantages and disadvantages of using email for communication.

9. What is cloud-based collaboration? Give an example.

10. Define digital literacy in your own words.

Section B: Conceptual Questions (5 marks each – 20 Marks) (CLO-2)

1. Discuss the evolution of computers from early mechanical devices to modern digital systems.

2. Explain how ICT has transformed the business and industrial sectors. Support your answer with at least three practical examples.

3. Describe five techniques to perform an effective search on the internet.

4. Compare and contrast traditional communication methods (letters, phone calls) with modern digital communication tools (email, instant messaging, video conferencing).

Section C: Practical/Applied Tasks (20 Marks) (CLO-2 & CLO-3)

Task 1: Search Engine Activity (10 Marks) (CLO-2)

1. Use Google Advanced Search to find research articles on "Artificial Intelligence in Education."

2. Use search operators (e.g., site:, " ", filetype:) to find a PDF report published by a university or research organization.

3. Explain which search filters you used and how they improved your results.

4. Summarize your findings in one paragraph.

Task 2: Collaboration & Communication Tools (10 Marks) (CLO-3)

1. Create a team workspace using any one of the following platforms: Google Workspace, Microsoft Teams, Slack, or Zoom.

2. Add a group of classmates, share a document, and schedule a short meeting or chat.

3. Take screenshots of the workspace, shared document, and chat/meeting window.

4. Write a short reflection (100 words) on how digital collaboration improved your productivity.

Bonus Question (Optional – 5 Marks) (CLO-2)

Research and write a short paragraph (100–150 words) on how Artificial Intelligence and Cloud Computing are influencing the future of ICT.

Marking Rubric

Criteria	Marks	Description
Conceptual understanding	20	Accuracy, depth, and relevance of answers
Practical tasks	20	Successful execution, screenshots, explanation
Presentation & formatting	5	Clarity, structure, and organization
Grammar & originality	5	Correct language, no plagiarism